UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,180	02/10/2005	Richard M. Miller-Smith	GB 020131	2824

24737   7590   12/12/2007

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ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
12/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/524,180	MILLER-SMITH, RICHARD M.
	Examiner	Art Unit	
	Candal Elpenord	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _10 February 2007_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-30_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-4, 6-18, 20-27, 29-30_ is/are rejected.

7)☒ Claim(s) _5, 19, 28_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _10 February 2007_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _31 October 2005_.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   **Claims 27-30** are objected to because of the following informalities:

Regarding claim 27, the occurrence of the "apparatus according to claim 24"

seems to refer back to the system claim. If it is true, it is suggested to applicant to

change "apparatus" to --system--. Similar problems exist in claims 28, lines a, claim 29,

lines 1.

Claim 30 is objected since it depends on claim 27.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
conditions and requirements of this title.

Claims 12-14 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

Regarding claim 12, the limitation "a computer program product" is not a

process, machine, manufacturer, or composition of matter, or any new and useful

improvement thereof because there is no physical structure/connection of the computer

software recited in the claim. To overcome this rejection, it is suggested to applicant to

change "computer program product" to --computer readable medium encoded with

computer executable instructions--. Similar problems exist in claim 13, lines 1, claim 14,

lines 1-2.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action: .

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating
       obviousness or nonobviousness.

5.   **Claims 1, 12-15, 26** are rejected under 35 U.S.C. 103(a) as being unpatentable

over Liu et al (US 7,248,590 B1) in view of Hata et al (US 2002/0021700 A1).

Regarding claim 1,12-15, 26, Liu et al. discloses a method ("method for

converting video packets into IP packets", recited in col. 1, lines 36-43) for streaming of

data with a limited bandwidth ("limited resources", recited in col. 3, lines 45-66)

communications network (fig. 1, IP Network 104, recited in col. 2, lines 61- col. 3, lines

1-7), the method ("method for converting video packets into IP packets", recited in col.

1, lines 36-43) comprising: reducing the bit rate stream using transrater means (fig. 1,

Gateway 106, "provides conversion and transcoding of video input", recited in col. 3,

lines 17-28); **regarding claim 15**, a system ("method and apparatus for converting

video packets into IP packets", recited in col. 1, lines 34-43) for streaming of data

("combine of plurality of video packets", recited in col. 1, lines 44-55) with a limited

bandwidth ("limited resources", recited in col. 3, lines 45-66) communications

network(fig. 1, IP Network 104, recited in col. 2, lines 61- col. 3, lines 1-7), the system

("method and apparatus for converting video packets into IP packets", recited in col. 1,

lines 34-43) comprising: transrater means ("combined of video packets into IP packets",

recited in col. 1, lines 44-56); means to input data packets ("receiving video packets via

the network interface", recited in col. 1, lines 57-65) to the transrater means (fig. 1,

Gateway 106, "provides conversion and transcoding of video input", recited in col. 3,

lines 17-28) to reduce the bit rate stream (by combining the video packets into plurality

of IP packets-the bit stream is reduced); **regarding claim 12**, a computer program

product ("program instructions", recited in col. 9, lines 24-41) directly loadable into the

internal memory (fig. 8, Memory 857, recited in col. 9, lines 14-23) of a digital computer

(fig. 1, Set Top Box 110, recited in col. 2, lines 61-67 and col. 3, lines 1-7), comprising

software code portions ("machine readable medium with program instructions", recited

in col. 9, lines 24-41) for performing the steps of any one or more of claims 1 to 11 when

said product is run on a computer, **regarding claim 13**, a computer program ("program

instructions", recited in col. 9, lines 24-41) for performing the steps of any one or more

of claims 1 to 11 when said product ("program instructions", recited in col. 9, lines 24-

41) is run on a computer(fig. 1, Set Top Box 110, recited in col. 2, lines 61-67 and col.

3, lines 1-7), **regarding claim 14**, Electronic distribution (fig. 1, Video Server 102,

recited in col. 2, lines 61-67 and col. 3, lines 1-7) of a computer program product (fig. 1,

Video Storage 112, recited in col. 2, lines 61-67 and col. 3, lines 1-7) on a computer

(fig. 1, Set Top Box 110, recited in col. 2, lines 61-67 and col. 3, lines 1-7).

Liu et al. discloses all the subject matter of the claimed invention with the

exception of being silent with regard to the following features: **regarding claim 1**,

prioritising missing data packets for re-sending according to content format and/or age;

re-sending the data packets according to the prioritisation, **regarding claim 15**, means

to prioritise missing data packets for re-sending according to content format and/or age;

means to re-send the missing data packets according to the prioritisation.

However, Hata et al. in a similar field of endeavor discloses the following

features: **regarding claim 1**, prioritising (fig. 1, Priority Assignment Control Part 12,

recited in paragraph 0042) missing (fig. 1, Packet Receiver 23, "detecting packet loss",

recited in paragraph 0046) data packets (fig. 1, Packet Receiver 23, "detecting packet

loss", recited in paragraph 0046) for re-sending ("retransmitting of high priority packet",

recited in paragraph 0015) according to content format ("packet types as intra-coded

packet and inter-coded packet", recited in paragraph 0018-0020) and/or age (fig. 2,

Device 100, TS or Timestamp", recited in paragraph 0050); re-sending the data

packets according to the prioritisation ("retransmission of packet loss with high priority",

recited in paragraphs 0054-0056), **regarding claim 15**, means to prioritise (fig. 1,

Priority Assignment Control Part 12, recited in paragraph 0042) missing data packets

(fig. 1, Packet Receiver 23, "detecting packet loss", recited in paragraph 0046) for re-

sending ("retransmitting of high priority packet", recited in paragraph 0015) according to

content format ("packet types as intra-coded packet and inter-coded packet", recited in

paragraph 0018-0020) and/or age (fig. 2, Device 100, TS or Timestamp", recited in

paragraph 0050); means to re-send the missing data packets according to the

prioritisation("retransmission of packet loss with high priority", recited in paragraphs

0054-0056). Therefore, it would have been obvious to one of ordinary skill in the art at

the time the invention was made to modify the features of Aharoni et al. et al. by using

features as taught by Hata et al. in order to provide service provisioning by assigning

priority to data packets which creates an efficient network (See paragraph 0013 for

motivation).

6.   **Claims 1-3, 8-9, 12-17, 26-27,** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Liu et al (US 7,248,590 B1) in view of Fukushima et al (US 6,918,077

B2).

  Regarding claim 1, Liu et al. discloses a method ("method for converting video

packets into IP packets", recited in col. 1, lines 36-43) for streaming of data with a

limited bandwidth ("limited resources", recited in col. 3, lines 45-66) communications

network (fig. 1, IP Network 104, recited in col. 2, lines 61- col. 3, lines 1-7), the method

("method for converting video packets into IP packets", recited in col. 1, lines 36-43)

comprising: reducing the bit rate stream using transrater means (fig. 1, Gateway 106,

"provides conversion and transcoding of video input", recited in col. 3, lines 17-28);

regarding claim 15, a system ("method and apparatus for converting video packets into

IP packets", recited in col. 1, lines 34-43) for streaming of data ("combine of plurality of

video packets", recited in col. 1, lines 44-55) with a limited bandwidth ("limited

resources", recited in col. 3, lines 45-66) communications network(fig. 1, IP Network

104, recited in col. 2, lines 61- col. 3, lines 1-7), the system ("method and apparatus for

converting video packets into IP packets", recited in col. 1, lines 34-43) comprising:

transrater means ("combined of video packets into IP packets", recited in col. 1, lines

44-56); means to input data packets ("receiving video packets via the network

interface", recited in col. 1, lines 57-65) to the transrater means (fig. 1, Gateway 106,

"provides conversion and transcoding of video input", recited in col. 3, lines 17-28) to

reduce the bit rate stream (by combining the video packets into plurality of IP packets-

the bit stream is reduced); **regarding claim 12**, a computer program product ("program

instructions", recited in col. 9, lines 24-41) directly loadable into the internal memory (fig.

8, Memory 857, recited in col. 9, lines 14-23) of a digital computer (fig. 1, Set Top Box

110, recited in col. 2, lines 61-67 and col. 3, lines 1-7), comprising software code

portions ("machine readable medium with program instructions", recited in col. 9, lines

24-41) for performing the steps of any one or more of claims 1 to 11 when said product

is run on a computer, **regarding claim 13**, a computer program ("program instructions",

recited in col. 9, lines 24-41) for performing the steps of any one or more of claims 1 to

11 when said product ("program instructions", recited in col. 9, lines 24-41) is run on a

computer(fig. 1, Set Top Box 110, recited in col. 2, lines 61-67 and col. 3, lines 1-7),

regarding claim 14, Electronic distribution (fig. 1, Video Server 102, recited in col. 2,

lines 61-67 and col. 3, lines 1-7) of a computer program product (fig. 1, Video Storage

112, recited in col. 2, lines 61-67 and col. 3, lines 1-7) on a computer (fig. 1, Set Top

Box 110, recited in col. 2, lines 61-67 and col. 3, lines 1-7).

Liu et al. discloses all the subject matter of the claimed invention with the

exception of being silent with regard to the following features: **regarding claim 1**,

prioritising missing data packets for re-sending according to content format and/or age;

re-sending the data packets according to the prioritisation, **regarding claim 15**, means

to prioritise missing data packets for re-sending according to content format and/or age;

means to re-send the missing data packets according to the prioritisation, **regarding**

claim 2, wherein the prioritisation step includes defining the data packets according to

content type, comprising audio data packets and video data packets, **Regarding claim**

3, wherein the prioritisation step includes defining three video types comprising I-

frames, P-frames, and B-frames, **regarding claim 8**, a method comprising incrementing

a resend timer when a new data packet is received, and requesting a data packet at

certain intervals of the timer., **regarding claim 9**, a method according to claim 8 further

comprising incrementing the resend timer after a period of receiving no data packets.

However, Fukushima et al. in a similar field of endeavor discloses the following

features: **regarding claim 1**, prioritising (fig. 1a, Packet Priority Decision Unit 15,

recited in col. 15, lines 18- 34) missing data packets (fig. 2, Error Packet Detection Unit

22, recited in col. 15, lines 58-67) for re-sending (fig. 2, Retransmission Instruction

Output Unit 26, "outputs error packet", recited in col. 16, lines 1-12) according to

content format ("retransmitted of error packet with high priority and frame types", recited

in col. 17, lines 35-54) and/or age; re-sending the data packets ("retransmission of high

priority packets", recited in col. 17, lines 35-54) according to the prioritisation

("retransmission of error packet , **regarding claim 2**, wherein the prioritisation step

("priority information of packet", recited in col. 17, lines 3-19) includes defining the data

packets ("giving data packet frame type", recited in col. 17, lines 47-54) according to

content type ("digital data such as video data, audio data and text data", recited in col.

15, lines 10-17), comprising audio data packets ("stream communication with audio",

recited in col. 14, lines 26-30) and video data packets ("stream communication with

video signal", recited in col. 14, lines 26-30), **Regarding claim 3**, wherein the

prioritisation step includes defining three video types comprising I-frames ("I frame",

recited in col. 14, lines 16-30), P-frames ("P frame", recited in col. 14, lines 16-30) and

B-frames ("B frame", recited in col. 14, lines 16-30), **regarding claim 8**, incrementing a

resend timer when a new data packet is received, and requesting a data packet at

certain intervals of the timer, **regarding claim 9**, a method further comprising

incrementing the resend timer after a period of receiving no data packets.

However, Fukushima et al. discloses **regarding claim 8**, incrementing a resend timer

(fig. 15, Increment of retransmission count S1,2", recited in col. 26, lines 66- col. 26,

lines 38) when a new data packet is received ("retransmission request for high priority

packet", recited in col. 26, lines 5-38), and requesting a data packet("retransmission

request for high priority packet", recited in col. 26, lines 5-38) at certain intervals of the

timer ("retransmission timing", recited in col. 23, lines 6-27), **regarding claim 9**, a

method further comprising incrementing the resend timer (fig. 15, Increment of

retransmission count S1,2", recited in col. 26, lines 66- col. 26, lines 38) after a period of

receiving no data packets ("error packets and subsequent retransmission", recited in

col. 4, lines 37-52 and "setting a n arrival time for packet", recited in col. 6, lines 32-47).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the features of Liu et al. by using features as taught by

Fukushima et al in order to improve real-time transmission quality (See Col. 2, lines 26-

53 for motivation).

7.   **Claims 4, 6-7, 10-11** are rejected under 35 U.S.C. 103(a) as being unpatentable

over Liu et al (US 7,248,590 B1) in view of Fukushima et al (US 6,918,077 B2) as

applied to claim 1 above, and further in view of Rey et al (US 2005/00366546 A1).

Regarding claim 6, Fukushima et al. discloses the audio frames ("audio data",

recited in col. 15, lines 10-16).

Regarding claims 4, 6-7 and 10- 11, Liu et al and Fukushima et al. disclose the

method/ systems as recited in above paragraph. But Liu and Fukushima et al. are

however silent with regard to the following features: **regarding claim 4**, wherein the

prioritisation step includes defining, for each data packet type, a weighting factor,

regarding claim 6, A method according to claim 4 or 5 wherein the weighting factor W

for the types of data packet are, in reducing order of importance: (i) audio;(ii) I-frames;

(iii) P-frames; (iv) B-frames, **regarding claim 7**, a method comprising re-sending the

data packets with the highest value of P first and thereafter re-sending in sequence

according to reducing values of P, with the lowest value of P being last, **regarding

claim 10**, a method comprising transmitting resend commands only on a certain interval

of the resend timer, **regarding claim 11**, the limited bandwidth communications

network comprises a wireless network.

However, Rey et al. in a similar field of endeavor discloses the following features:

regarding claim 3, wherein the prioritisation ("assigning unique priority level to each

video data unit", recited in paragraph 0015) step includes defining three video types (fig.

2, Video frames levels", recited in paragraphs 0033-0034) comprising I-frames (fig. 2, I

frames , recited in paragraph 0033), P-frames (fig. 2, Pm frames, recited in paragraph

0034 and paragraph 0042,), , and B-frames (fig. 2, Pi frames, recited in paragraph 0033

and paragraph 0042), **regarding claim 4**, wherein the prioritisation ("assigning unique

priority level to each video data unit", recited in paragraph 0015) step includes defining,

for each data packet type ("PDU or Packet Data Unit", recited in paragraph 0022) a

weighting factor ("assigning priority level to each PDU and weight", recited in

paragraphs 0033-0035, fig. 2, PDU weight and frame types, recited in paragraphs 0039-

0042), **Regarding claim 6**, Rey et al. discloses a method ("transmitting video data by

assigning a priority level", recited in abstract, lines 1-10), wherein the weighting factor W

(fig. 3, Weight per PDU, fig. 1, Weighting Unit 140, recited in paragraph 0023 and

paragraph 0048) for the types of data packet (fig. 3, PDUs, recited in paragraph 0048)

are, in reducing order of importance ("priority levels with sequencing numbers and

giving lower weights to less important PDU", recited in paragraphs 0047-0048 and

0050): (fig. 2, I frames , recited in paragraph 0033), P-frames (fig. 2, Pm frames,

recited in paragraph 0034 and paragraph 0042,), and B-frames (fig. 2, Pi frames,

recited in paragraph 0033 and paragraph 0042), **regarding claim 7**, discloses a method

("transmitting video data by assigning a priority level", recited in abstract, lines 1-10),

comprising re-sending the data packets (fig. 1, Transmission Judgment Unit 160,

"deciding which PDU to be sent or resent according to highest priority level", recited in

paragraph 0024) with the highest value of P first ("priority value", recited in paragraph

0023 and "selecting highest priority", recited in paragraph 0026) and thereafter re-

sending in sequence (fig. 3, SDN or sequence numbers per DU, recited in paragraph

0050) according to reducing values of P (col. 3, Table with sequencer number recited in

paragraph 0048), with the lowest value of P being last ("retransmission of frames with

the highest priority while frame with lowest priority being delayed", recited in paragraph

0051), **regarding claim 10**, a method ("transmitting video data by assigning a priority

level", recited in abstract, lines 1-10) comprising resend commands ("selecting a PDU

for retransmission", recited in paragraph 0024, "request for retransmissions", recited in

paragraph 0027) only on a certain interval "expiration time as the time a PDU can be

sent", recited in paragraph 0023) of the resend timer ("request for retransmissions",

recited in paragraph 0027 and "real-time protocol PDU", recited in paragraph 0031),

regarding claim 11, a method ("transmitting video data to video client", recited in

paragraph 0022), wherein the limited bandwidth communication network comprises a

wireless network (fig. 1, Video Client 120, Wireless Channel 130, recited in paragraph

0021). Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify the features of Liu et al. with Fukushima et al. by

using features as taught by Rey et al. in order to provide an efficient bandwidth usage

which improves transmission quality (See paragraph 0013-0014 for motivation).

8.   **Claims 1-4, 6, 15-18, 20, 26-27, 29,** are rejected under 35 U.S.C. 103(a) as

being unpatentable over Aharoni et al (US 6,014,694) in view of Hata et al (US

2002/0021700 A1).

Regarding claim 1, Aharoni et al. discloses a method ("compression of video

data stream", recited in col. 6, lines 46-60) for streaming of data with a limited

bandwidth ("adjusting the compression in accordance with bandwidth", recited in col. 6,

lines 61-67 and col. 7, lines 1-6) communications network (fig. 1, Network 20, recited in

col. 6, lines 46-60), the method ("compression of video file", recited in col. 6, lines 46-

60) comprising: reducing the bit rate stream ("compressing a raw video source", recited

in col. 2, lines 54-65) using transrater means (fig. 9, Packet Generator 102, recited in

col. 12, lines 42-55, "encapsulating video frame into plurality of packets to reduce the

bandwidth", recited in col. 3, lines 47-61), **regarding claim 2,** Aharoni et al. discloses a

method ("compression of video file", recited in col. 6, lines 46-60) wherein the

prioritisation ("varying degree of quality and priority", recited in col. 9, lines 57-65) step

includes defining the data packets ("generating prioritized video data stream", recited in

col. 2, lines 29-39) according to content type ("raw video source into plurality of different

types", recited in col. 2, lines 66- col. 3, lines 8), comprising audio data packets ("audio

video format", recited in col. 6, lines 46-60 and lines 30-32) and video data packets

("plurality of video frames", recited in col. 2, lines 66- col. 3, lines 8), **regarding claim 3,**

Aharoni et al. discloses a method ("compression of video data stream", recited in col. 6,

lines 46-60) wherein the prioritisation ("varying degree of quality and priority", recited in

col. 9, lines 57-65) step includes defining three video types ("generating video data

stream comprised of Key Frames, P Frames and B Frames", recited in abstract, lines 10-19) comprising I-frames (fig. 4, Key Frame, recited in col. 8, lines 64- col. 9, lines 2), P-frames (fig. 4, P Frame, recited in col. 8, lines 64- col. 9, lines 2) and B-frames (fig. 4, B Frame, recited in col. 8, lines 64- col. 9, lines 26), **regarding claim 4**, Aharoni et al. discloses a method ("compression of video data stream", recited in col. 6, lines 46-60) wherein the prioritisation ("varying degree of quality and priority", recited in col. 9, lines 57-65) step includes defining, for each data packet type (Key Frame, P Frame, and B Frame, recited in col. 10, lines 50- col. 11, lines 24) a weighting factor (fig. 5-7, "data levels or data sizes associated with", recited in col. 10, lines 50- col. 11, lines 24), **regarding claim 6**, Aharoni et al. discloses a method ("compression of video data stream", recited in col. 6, lines 46-60), wherein the weighting factor W ("data sizes per frame levels", recited in col. 10, lines 22-33) for the types of data packet (fig. 5-8, Frame types with data sizes", recited in col. 10, lines 34 - col. 11, lines 24) are, in reducing order of importance: (i) audio ("video stream", recited in col. 8, lines 42-63); (ii) I-frames ("Key frame as the highest priority frame", recited in col. 9, lines 57 –col. 10, lines 4) ; (iii) P-frames ("P frame as the second most important frame" recited in col. 10, lines 5-11); (iv) B-frames ("B frame as the least important frame", recited in col. 10, lines 11-20), **regarding claim 15**, a system ("system to compress video/audio data where the available bandwidths varies with time", recited in col. 2, lines 11-28) for streaming of data with a limited bandwidth ("adjusting the bandwidth in accordance with the channel bandwidth", recited in col. 6, lines 61- col. 7, lines 6) communications network (fig. 1, Video Transport System, recited in col. 6, lines 42-56), the system ("system to

compress video/audio data where the available bandwidths varies with time", recited in

col. 2, lines 11-28) comprising: transrater means (fig. 9, Packet Generator 102, recited

in col. 12, lines 42-55, "encapsulating video frame into plurality of packets to reduce the

bandwidth", recited in col. 3, lines 47-61); means to input data packets to the transrater

means (fig. 9, Packet Generator 102, recited in col. 12, lines 42-55, "encapsulating

video frame into plurality of packets to reduce the bandwidth", recited in col. 3, lines 47-

61); to reduce the bit rate stream ("compressing a raw video source", recited in col. 2,

lines 54-65).

Aharoni et al. discloses all the claimed limitation with the exception of being silent

with regard to the following features: **regarding claim 1**, prioritising missing data

packets for re-sending according to content format and/or age; re-sending the data

packets according to the prioritisation, **regarding claims 15, 26** means to prioritise

missing data packets for re-sending according to content format and/or age; means to

re-send the missing data packets according to the prioritisation.

However, Hata et al. in a similar field of endeavor discloses the following

features: **regarding claims 1, 15, 26** prioritising (fig. 1, Priority Assignment Control Part

12, recited in paragraph 0042) missing (fig. 1, Packet Receiver 23, "detecting packet

loss", recited in paragraph 0046) data packets (fig. 1, Packet Receiver 23, "detecting

packet loss", recited in paragraph 0046) for re-sending ("retransmitting of high priority

packet", recited in paragraph 0015) according to content format ("packet types as intra-

coded packet and inter-coded packet", recited in paragraph 0018-0020) and/or age (fig.

2, Device 100, TS or Timestamp", recited in paragraph 0050); re-sending the data

packets according to the prioritisation ("retransmission of packet loss with high priority",

recited in paragraphs 0054-0056), **regarding claim 15**, means to prioritise (fig. 1,

Priority Assignment Control Part 12, recited in paragraph 0042) missing data packets

(fig. 1, Packet Receiver 23, "detecting packet loss", recited in paragraph 0046) for re-

sending ("retransmitting of high priority packet", recited in paragraph 0015) according to

content format ("packet types as intra-coded packet and inter-coded packet", recited in

paragraph 0018-0020) and/or age (fig. 2, Device 100, TS or Timestamp", recited in

paragraph 0050); means to re-send the missing data packets according to the

prioritisation("retransmission of packet loss with high priority", recited in paragraphs

0054-0056). Therefore, it would have been obvious to one of ordinary skill in the art at

the time the invention was made to modify the features of Aharoni et al. et al. by using

features as taught by Hata et al. in order to provide service provisioning by assigning

priority to data packets which creates an efficient network (See paragraph 0013 for

motivation).

Claims 20, 26-27 and 29 are rejected for the same reasons as claims 1-4, 6 and

15-18.

9.   **Claims 7, 10-11, 21, 24-25, 30** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Aharoni et al (US 6,014,694) in view of Hata et al (US 2002/0021700

A1) as applied to claim1 above, and further in view of Rey et al (US 2005/0036546 A1).

Aharoni and Hata disclose all the claimed limitation with the exception of being

silent with respect to the following features: **regarding claim 7**, a method comprising

resending the data packets with highest value of P first and thereafter resending in

sequence according to reducing values of P, with the lowest value of P being last, **regarding claim 10**, a method, comprising transmitting resend commands only on a certain interval of the resend timer, **regarding claim 11**, a method wherein the limited bandwidth communications network comprises a wireless network.

However, Rey et al in a similar field of endeavor discloses the following features: **regarding claim 7**, discloses a method ("transmitting video data by assigning a priority level", recited in abstract, lines 1-10), comprising re-sending the data packets (fig. 1, Transmission Judgment Unit 160, "deciding which PDU to be sent or resent according to highest priority level", recited in paragraph 0024) with the highest value of P first ("priority value", recited in paragraph 0023 and "selecting highest priority", recited in paragraph 0026) and thereafter re-sending in sequence (fig. 3, SDN or sequence numbers per DU, recited in paragraph 0050) according to reducing values of P (col. 3, Table with sequencer number recited in paragraph 0048), with the lowest value of P being last ("retransmission of frames with the highest priority while frame with lowest priority being delayed", recited in paragraph 0051), **regarding claim 10**, a method ("transmitting video data by assigning a priority level", recited in abstract, lines 1-10) comprising resend commands ("selecting a PDU for retransmission", recited in paragraph 0024, "request for retransmissions", recited in paragraph 0027) only on a certain interval "expiration time as the time a PDU can be sent", recited in paragraph 0023) of the resend timer ("request for retransmissions", recited in paragraph 0027 and "real-time protocol PDU", recited in paragraph 0031), **regarding claim 11**, a method ("transmitting video data to video client", recited in paragraph 0022), wherein the limited

bandwidth communication network comprises a wireless network (fig. 1, Video Client

120, Wireless Channel 130, recited in paragraph 0021). Therefore, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to modify

the features of Aharoni et al. with Hata et al. by using features as taught by Rey et al. in

order to provide an efficient bandwidth usage which improves transmission quality (See

paragraph 0013-0014 for motivation).

Claims 21, 24-25 and 30 are rejected for the same reasons as claims 7, 10-11.

Allowable Subject Matter

10.   **Claims 5, 19, 28** are objected to as being dependent upon a rejected base claim,

but would be allowable if rewritten in independent form including all of the limitations of

the base claim and any intervening claims.

Conclusion

11.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Harrell et al. (US 2003/0067872 A1), Ort et al (US 5,784,527),

and Kikuchi et al (US 6,970,472 B2) are cited to show methods and systems related to

the claimed invention.

12.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Candal Elpenord whose telephone number is (571) 270-

3123. The examiner can normally be reached on Monday through Friday 7:30AM to
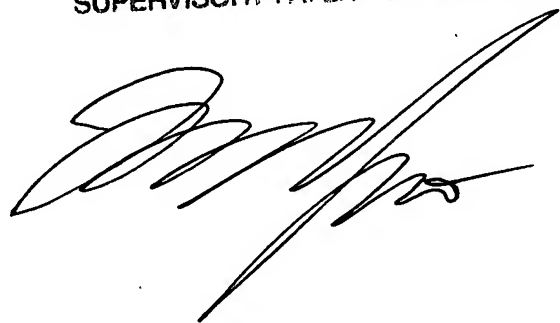
5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Bin Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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CE

KWANG BIN YAO
SUPERVISORY PATENT EXAMINER